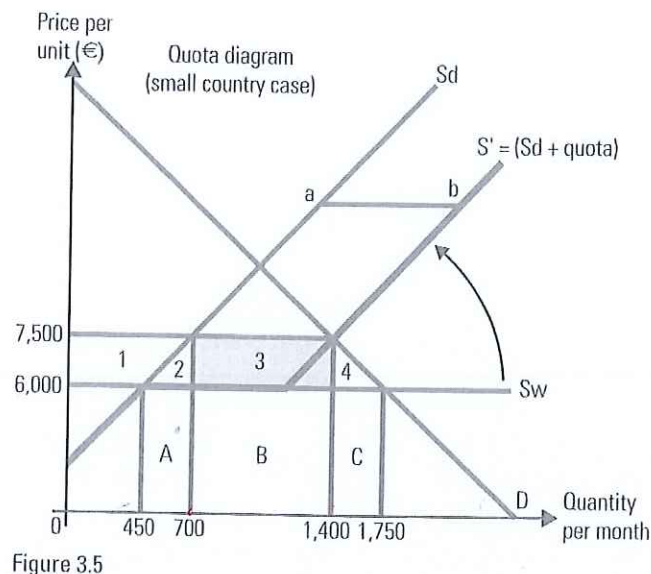


Question 2: Restrictions on trade

Assume that a quota is imposed on imports of good X. Answer the following questions using the information in the diagram below:



- What is the volume of the quota imposed? *700 units* (1 mark)
- Calculate the value of imports (import expenditure or export revenue) under free trade *1,300 × €6,000 = €7.8 million* (2 marks)
- Calculate the revenues earned by domestic producers under free trade *450 × €6,000 = €2.7 million* (2 marks)
- Calculate consumer expenditures of the good under free trade *1,750 × €6,000 = €10.5 million* (2 marks)
- Calculate the change in the volume of imports as a result of the quota *1,300 - 700 = 600 less.* (2 marks)
- How much did consumers spend on the good after the quota was imposed? *€7,500 × 1,400 = €10.5 million.* (2 marks)
- What can you infer about the price elasticity of demand (PED) for the good given the price change in the market? *0.8. PED = 0.8 as revenue did not change.* (3 marks)
- Calculate the size of the quota rents (area 3). Who earns these rents? *1,500 × 700 = €1,050,000 - Importers - government.* (2 marks)
- Calculate the resulting decrease in consumer surplus. *1 + 2 + 3 + 4 = 1,500 × 1,400 + 1/2 × 1,500 × 700 = €2,362,500* (2 marks)
- Calculate the resulting increase in domestic producer surplus. *Area 1 = €862,500* (2 marks)
- What do Areas 2 & 4 represent respectively? *Area 2 = consumer production inefficiency, Area 4 = consumption inefficiency.* (4 marks)

Question 3: Restrictions on trade

Assume that a subsidy is granted to the producers of good X. Answer the following questions using the information in the diagram below:

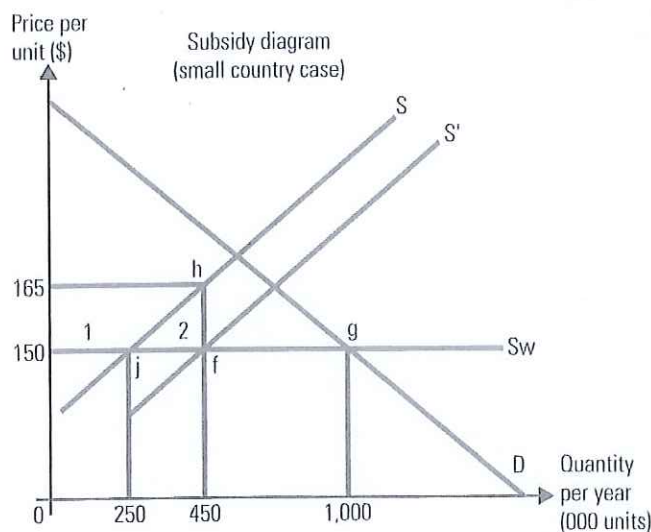


Figure 3.6

1. What is the size of the subsidy granted (on a per unit basis)? **\$15** (1 mark)

2. Calculate the value of imports (import expenditure) under conditions of free trade. **750,000 × 150 = \$112.5 million** (2 marks)

3. Calculate the revenue earned by domestic producers under free trade **250,000 × 150 = \$37.5 million** (2 marks)

4. Calculate the change in the volume of imports as a result of the subsidy **Imports before = 750,000 After = 550,000** (2 marks)

5. Calculate the change to domestic producer revenue after the subsidy **After = 165 × 450,000 = \$74.25 million - 37.5 = \$36.75 million increase** (3 marks)

6. Calculate the total cost of the subsidy to the government **\$15 × 450,000 = \$6.75 million** (2 marks)

7. Calculate the resulting production inefficiency **200,000 × 15 / 2 = \$1.5 million** (2 marks)